BOOK REVIEW

IMPORTANT WORK ON THE FLORA OF NEW ENGLAND¹

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The experience of having used Seymour's "Flora of New England" rather constantly for over a year has provided this reviewer with an unusual awareness of both the strengths and weaknesses of the book. At present, when dealing with New England plants, I am inclined to rely nearly as much on Seymour's "Flora" as on Fernald's 8th edition of Gray's Manual. This is not to say that it replaces the "Manual", but it does supplement it nicely in certain particulars and in nomenclature tends to bring the older book up to date for New England.

"The Flora of New England", as indicated in the subtitle, is more than a flora in that it has keys to genera and species and brief diagnoses of families and genera, thus making it available as a laboratory text for college classes dealing with New England plants. In this respect, then, it is a "Manual".

Blake and Atwood (Geographical Guide to Floras of the World, Part I, U. S. Dep. Agr., Misc. Publ. 401, 1942, pp 8-9) have made some suggestions concerning the kinds of information to be included in a "flora", many but not all of which have been satisfactorily followed by Seymour. In addition it would have been desirable, for an area so long worked over as New England, to include a listing, perhaps only a selected one, of the local floras of the region, particularly since many of these provide additional and much more detailed information about the occurrences of plants locally. For example, it seems neglectful not to have listed the admirably complete "Flora of Northern New Hampshire" by Arthur Stanley Pease.

The Flora of New England. A Manual for the Identification of all Vascular Plants including Ferns and Fern Allies and Flowering Plants growing without Cultivation in New England, by Frank Conkling Seymour. Charles E. Tuttle Co., Rutland, Vermont, 1969. xvi + 596 pp. illus. \$12.50.

Unfortunately, the "profit motive" has to be a prime consideration in the preparation of a "flora". In order to "sell" the book has to be kept within certain limits of size, and has to be useful to a variety of persons such as college students in botany courses. Recent state floras and now this regional flora reflect a trend to incorporate in them keys, brief descriptions and numerous illustrations as well. It certainly is often in order for a flora to provide in one package a body of information relating to the places where taxa are to be found along with the means to identify and recognize these taxa. But to do both of these tasks well or even passably well for an area the size of New England is a very large order. It is obvious that the author had to make many compromises to produce a book that could at once be both "flora" and "manual". To me, it still seems a matter of wonder that the result of these concessions by Seymour is, nonetheless, a book of considerable merit. However, at this point I would urge that the authors of floras now in the making should adhere more strictly to the ideal concept of a flora, and that sponsors strive a bit harder to provide financial support. If the current trend is continued we may expect for the "Gray's Manual Range" that there will be an almost endless series of local, state and sectional "manuals" with greatly overlapping and repetitive information to the detriment of the peculiar information about ranges, locations, collectors and records that we have good reason to expect from a carefully documented "flora".

There is little point in describing the book's contents. By now it has been widely distributed and must indeed be familiar to many of the readers of Rhodora and should, of course, be in the hands of all those seriously interested in the flora of New England. Moreover, although I can't agree with all of Mr. Seymour's choices of scientific names or all his taxonomic decisions, these are often matters of opinion for which no competent author should be severely criticized.

It is, then, at certain of the floristic aspects of "The Flora of New England" that I will direct my attention, a few

points seeming to invite discussion and possible disagreement. On page XIII in the Introduction we encounter the following statement: "In determining what species constitute the flora of New England, all which give evidence of having grown in this region without cultivation within twenty-five years are included." My own feeling about this is quite at variance with that of Mr. Seymour; if there is good evidence that a species grew naturally in historic time in any part of New England it is still part of the flora, and if it is believed not to grow there now, it still should be listed and its present status indicated. For phytogeographical considerations certainly a flora would include such species. I don't know whether the occasional discrepancies between the ranges of certain species, in the listing of States for example, as given by Fernald in Gray's Manual and by Seymour, are attributable to the latter's interpretation of what constitutes a flora, but in working up ranges of New England species for phytogeographical projects I always resort to Gray's Manual as well as Seymour.

Mr. Seymour is certainly to be commended for the care that he has taken in personally examining specimens for his records, and for his avoidance of unsubstantiated reports. In many instances he has visited localities of botanical interest and thereby verified interesting records. One's confidence is heightened by the knowledge that he has made a number of interesting discoveries in the New England flora.

A great many of the published records of New England species appearing in Rhodora through the years and in other journals to a lesser extent, as well as in local floras and in special treatments of ferns, orchids, woody plants, etc., certainly have much to contribute to the "flora" of a region, even though in some instances the specimens cited or mentioned in these works may be lost or buried in some small herbarium. It is my recollection that Professor Fernald paid attention to all serious reports that came to his attention, though it must be admitted that he accepted these only when he had confidence in the author's critical capacity. In any

revision of "The New England Flora", I would hope that the author will thoroughly examine the voluminous body of literature dealing with the vascular flora of New England, sifting out of it pertinent data to make the record complete.

I know that Frank Seymour visited the herbarium of the University of New Hampshire sometime during the years while he was preparing his book, but our herbarium is growing fast and, had he checked it a year or two before the manuscript was published, he would have had a very large number of additional townships in New Hampshire and some new State records.

In the matter of citing localities where specimens have been seen, I have a few comments to make. Somewhat arbitrarily Seymour decided to list the township whenever a species has been collected only once in a particular county, but otherwise to list the county when two or more townships in that particular county are represented. However, there is no map showing the townships in each state, nor is there any listing of towns in their respective counties. Thus one needs a good atlas to plot the ranges of species. In order to provide information about ranges of all taxa effectively (which I would think might be a major consideration in a flora), it would be necessary either to supply range maps at least for critical taxa, or to provide many more township records and a ready means of locating townships. Thus the book would require considerable amplification of content to provide anything approaching exact data on distribution for a great many taxa. Moreover, many counties such as Coös County in New Hampshire and particularly several of the counties in Maine, are so large that any indication of presence by county is not enough.

The importance of a scientific work is determined by the role that it plays in the progressive development of the science. For my own work on the study of the plants of Northeastern America, this book will stand as a sound foundation. Its weaknesses will serve to show us a better way, and its

many strengths will provide the base on which those of us who are working on facets of the flora of New England can build.

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SPIRANTHES TUBEROSA. NEW FOR KANSAS—During a study of the family Orchidaceae in Kansas, it was discovered that several specimens of *Spiranthes tuberosa* Raf. had been collected in southeastern Kansas (Bourbon, Cherokee and Woodson Counties) and mistakenly identified as the more common *S. gracilis* (Bigel.) Beck. This orchid has previously been reported from Massachusetts, through the Atlantic States, south to southcentral Florida, west to eastern Texas, Arkansas, Kentucky, Missouri and also Michigan. These specimens represent an extension northwestward of the range of the species.

REPRESENTATIVE SPECIMENS EXAMINED: Bourbon Co.: open wooded hillside, rocky clay soil, not common, 2 mi s of Uniontown, 2 October 1955, McGregor 11110 (KANU). Cherokee Co.: sandy rocky soil under Quercus alba and Q. stellata, not common, 5½ mi e of Baxter Springs, 3 October 1955, McGregor 11055 (KANU). Woodson Co.: open oak wooded bank, sandy soil, rare, Lake Fegan, Woodson Co. State Park, 25 September 1955, Lathrop 1884 (KANU).

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